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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,225	02/13/2002	Yasuo Tokitoh	218197US0	4815

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EXAMINER	
JOHNSON, EDWARD M	

ART UNIT	PAPER NUMBER
1754	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/073,225	TOKITOH, YASUO
	Examiner	Art Unit
	Edward M. Johnson	1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *26-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-25, drawn to a composite and method of making thereof, classified in class 423, subclass 327.1.

II. Claims 26-29, drawn to a method for oxidizing a hydrocarbon, classified in class 585, subclass 250+.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed could be used in a materially different process, such as a process for NOx reduction or steam reformation.

Because these inventions are distinct for the reasons given above, have acquired a separate status in the art as shown by their different classification, and the search required for

Group I is not required for Group II, restriction for examination purposes as indicated is proper.

2. Newly submitted claims 26-29 directed to an invention that is independent or distinct from the invention originally claimed for the foregoing reasons.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 26-29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-15, 20, 22, and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirahara et al. US 6,064,560.

Regarding claims 1, Hirahara '560 discloses a carbon catalyst carrier (see column 2, lines 5-18) mixed, heated, and

dried with 9g of potassium hydroxide in powder form (see Example 6) at temperatures of 90 degrees (see Preparation Example 1) and 400-1000 degrees (see column 4, lines 9-13).

Regarding claims 2-3, Hirahara '560 discloses 90 degrees (see Preparation Example 1) and 400-1000 degrees (see column 4, lines 9-13).

Regarding claim 4, Hirahara '560 discloses pores (see abstract).

Regarding claims 5-6, Hirahara '560 discloses silica gel (see column 1, lines 45-50).

Regarding claims 7-8, Hirahara '560 discloses coal (see column 1, lines 32-38).

Regarding claim 9, Hirahara '560 discloses potassium hydroxide (see Example 6).

Regarding claim 10, Hirahara '560 discloses a thickness of 0.5 mm (see column 5, line 29) and less than 10 mm (see Example 1).

Regarding claims 11-15, Hirahara '560 discloses 3g to 9g (Example 6), no diffraction peaks, and separation and filtration (see column 1).

5. Claims 1-15, 20, 22, and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hamamatsu et al. US 5,811,611.

Regarding claim 1, Hamamatsu '611 discloses a method for making a catalyst comprising mixing potassium hydroxide and boehmite in a crucible, heating, drying, and cooling (see Example 1) at temperatures of 80-200 degrees.

Regarding claims 2-15, Hamamatsu '611 discloses 80-200 degrees, pores, boehmite, potassium hydroxide, 6 mesh particle size, and 66 g to 60 g (see columns 7-8).

6. In the event any differences can be shown for the product of the product-by-process claims 1-15, as opposed to the product taught by Hirahara '560 and/or Hamamatsu '611, such differences would have been obvious to one of ordinary skill in the art at the time the invention was made as a routine modification of the product in the absence of a showing of unexpected results; see also In re Thorpe, 227 USPQ 964 (Fed.Cir. 1985).

7. Claims 16-18, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirahara '560.

Regarding claim 16, Hirahara '560 discloses a carbon catalyst carrier (see column 2, lines 5-18) mixed, heated, and dried with 9g of potassium hydroxide in powder form (see Example 6) under atmospheric pressure (see column 4, lines 30-32) and 90 degrees (see Preparation Example 1).

Regarding claim 17, Hirahara '560 discloses drying in carbon dioxide (see preparation example 2).

Regarding claim 18, Hirahara '560 discloses 90 degrees (see Preparation Example 1).

Regarding claims 23 and 25, Hirahara '560 does not disclose metal hydroxide in the product and nitrogen or argon (see column 4, line 1).

8. Claims 16-19, 21, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamamatsu '611.

Regarding claim 16, Hamamatsu '611 discloses a method for making a catalyst comprising mixing potassium hydroxide and boehmite in a crucible, heating, drying, and cooling (see Example 1) at a pressure (see column 7, lines 57-59) and 80-200 degrees or 100-180 degrees (see column 7, lines 49-51).

Regarding claim 17, Hamamatsu '611 discloses air (see Example 1).

Regarding claims 18-19 and 21, Hamamatsu '611 discloses 80-200 degrees or 100-180 degrees (see column 7, lines 49-51).

Regarding claims 23 and 25, Hamamatsu '611 does not disclose metal hydroxide in the final product and a nitrogen atmosphere for heating (see Example 1).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirahara '560.

Hirahara fails to specifically disclose 200-400 degrees.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use 200-400 degree heating in the method of Hirahara because Hirahara discloses 400-1000 degrees (see column 4, lines 9-13), which would obviously, to one of ordinary skill, suggest that temperatures slightly below 400 are sufficient.

Response to Arguments

11. Applicant's arguments filed 2/18/04 have been fully considered but they are not persuasive.

The declaration under 37 CFR 1.132 filed 2/18/04 is insufficient to overcome the rejection of claims 1-25 based upon Hirahara and Hamamatsu as set forth in the last Office action because: The examples set forth are based on particular temperatures from specific Examples from Applicant's specification and do not demonstrate the entire claimed ranges. Since the declaration refer(s) only to the system described in

the above referenced application and not to the individual claims of the application, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

It is argued that the Office asserted that the prior art reference discloses... Claims 2 and 3. This is not persuasive because Applicant appears to admit that 400-1800 degrees is disclosed.

It is argued that although Hirahara discloses in Preparation Example 1... form is heated. This is not persuasive because the mixture is heated at the disclosed temperature, which anticipates the claimed temperature for heating the claimed mixture.

It is argued that Applicants traverse the Office's assertion... in view of Hirahara. This is not persuasive because Hirahara merely discloses that "usually" the temperature should not drop below 400, which is not considered to "teach away", since one of ordinary skill would understand "usually" to mean that sometimes it can or that it may be acceptable if still close to the disclosed 400 degrees, since the disclose suitable range in fact includes 400 degrees.

It is argued that Applicants submit that original claim 6... inorganic substance. This is not persuasive because Hirahara

discloses mixing with silica gel, which is inorganic (see above).

It is argued that new dependent Claims 26 and 28... present Claim 1. This is not persuasive for the reasons above.

It is argued that Applicants submit that Hamamatsu does not disclose... 80 to 400 °C. This is not persuasive because Hamamatsu subsequently discloses heating the mixture to 150 degrees (see Example 1, second paragraph). The fact that a calcination at a higher temperature is also disclosed does not prevent anticipation, since Applicant uses open language "comprising" in the claim, which does not preclude additional features.

It is argued that the Office has asserted that Example 1 discloses... to produce a catalyst. This is not persuasive because Applicant appears to admit that the high calcining temperature is only for producing a support. Applicant's claimed temperature range at which the catalyst is heated is disclosed, as is Applicant's claimed production from a metal hydroxide (see above). Therefore, the claim is anticipated.

It is argued that Applicants submit that Claims 7 and 8... organic-based support of present claims 7 and 8. This is not persuasive because Hamamatsu discloses the support may be made from various organic materials (see column 3, lines 12-25).

It is argued that the new dependent claims are allowable. This is not persuasive for the reasons above.

It is argued that in the Examples of Hirahara it is disclosed... potassium (see Example 6). This is not persuasive because the presence of such a peak is nowhere disclosed and because Applicant appears to admit that the "washing of Hirahara may dissolve and remove any postassium hydroxide," which would preclude such a peak.

It is argued that Hamamatsu likewise does not disclose composites wherein a peak attributable to... composite material. This is not persuasive because Hamamatsu nowhere discloses the presence of such a peak and also because Applicant appears to admit that the "preferred material" does not contain any hydroxide.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS

of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.

EMJ

STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700